THE SCOPE

APRIL, 1952

PUBLISHED BY THE STUDENTS OF THE MASSACHUSETTS COLLEGE OF OPTOMETRY

THE SCOPE

VOLUME XXIII NUMBER 3

APRIL, 1952

FEATURES

WHAT IS MATURITY?

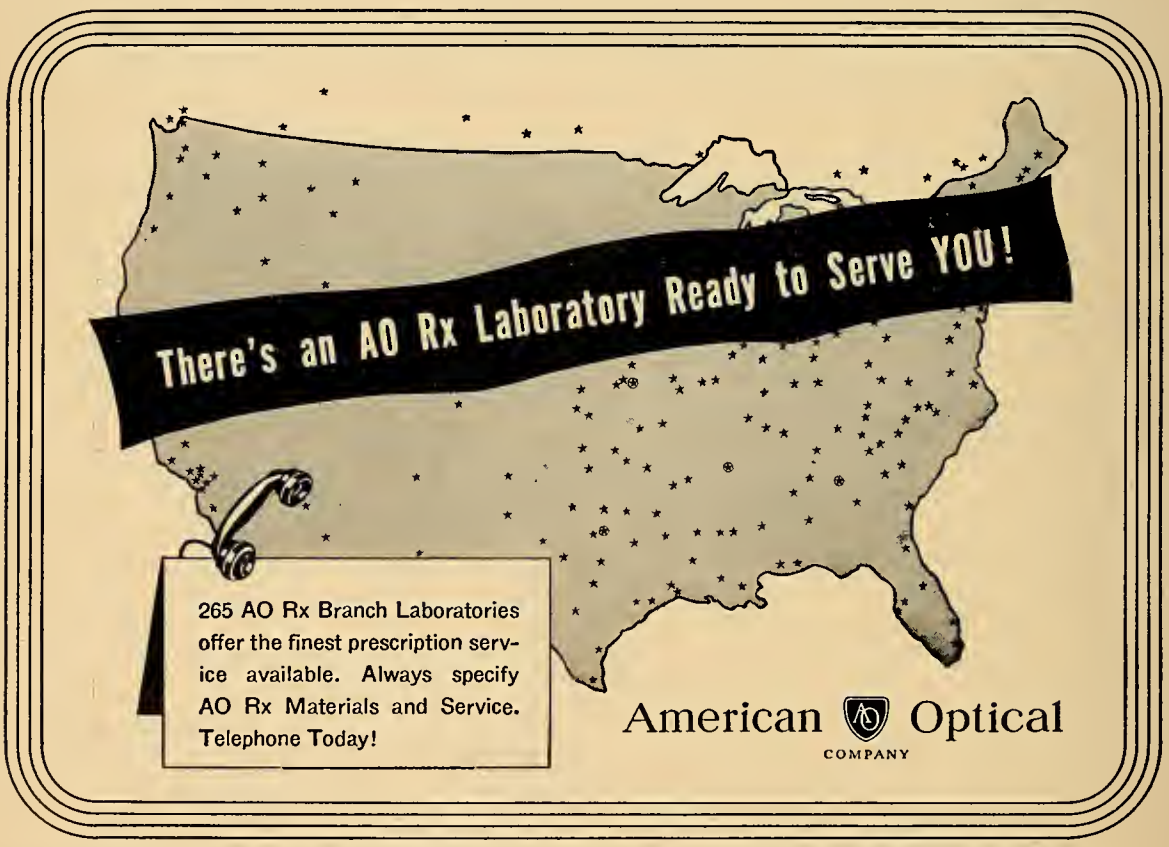
*by Dr. Arthur F. March, Jr.**

Maturity, observed at close range through the mental magnifying glass, becomes quite evidently something more than a mere matter of long trousers and a deepening voice, of lipstick and of driver's licenses, high heels and sex. What constitutes maturity? Quite obviously there must be many phases, and there can be no sharp dividing line between maturity and immaturity in any particular phase. The process is one of ripening, and just as it is impossible to say that an apple is green one minute and ripe the next, so too is it impossible to say at what precise stage in chronological development a particular individual becomes mature.

For a brief discussion of what constitutes maturity it may be convenient to make two distinct classifications: intellectual maturity and emotional maturity.

Intellectual maturity is concerned with the development of intelligence and education, and in speaking of these there must be kept in mind the distinct difference in meaning of the two terms. Intelligence may be said to be innate; studies indicate that it develops in the normal person up to the age of about sixteen years and then remains constant throughout life. It is of interest to note in passing that the brighter person may take longer to reach his particular intelligence quotient; children with lowered I.Q.'s apparently reach their maximum of mental power earlier. Education, on the other hand, quite obviously can be continued throughout life; there is no limit, broadly speaking, to the time during which we may learn new facts and acquire knowledge and experience, and yet the period of education as well as the type, has much influence on the achievement of intellectual maturity. The point to be remembered is that *intelligence* ceases to develop at a relatively early

(*Please turn to Page* 18)



Schoolroom Lighting

Leslie G. Wright, Jr., B.S., O.D.

According to legend, young Abraham Lincoln did most of his studying on the living-room floor, by the light of a hearth fire. It is hoped that he was aware of the $I = c.p. \div d^2 \cos i$ relationship which determines the intensity of illumination on a lighted object, for under conditions such as these, even when all the factors in that equation are given their optimum values, results are far below the accepted standards of good lighting. I know: I tried it last week!

Lighting design has come a long way since then. The past few decades have brought us new types of light sources, new theories of light distribution, and, above all, new concepts of the effect of illumination on vision. One of the most important applications of this knowledge has been made in the designs of class-rooms. It is here that so much critical seeing must be done; where hard use be made of the eyes during crucial periods of the child's growth. This should be the one place where maximum effort is made to give each individual possible aid toward better vision. In many schools, such effort has been made; yet in about 75% of all schoolrooms, in use today, lighting conditions are well below the modern standards.

Unfortunately, from the illumination consultants' point of view, the problem of school lighting is somewhat complex. Since most classes meet during the daytime hours, it is our highly variable daylight which serves as the primary source of illumination. Any system of artificial lighting must not only be effective by itself; it must also serve as a flexible supplement to the constantly changing light provided by nature. Then too, school-rooms themselves present a wide range of variation, ranging from sunswept top floor locations down to semi-basement class-rooms built along the general lines of the Black Hole of Calcutta. Yet a few general principles of light control apply to all situations.

In brief, there are two main facts which must be considered. First — is there enough light? Intensity of illumination is measured by a unit known as the "foot-candle", one such unit representing the intensity of light falling on an object one foot away from one candle. (Bright moonlight, incidentally, is equal to only .02 foot-candles, while direct sunlight may be as strong as 10,000.)

Twenty years ago, intensities of 5 to 10 foot-candles were considered adequate for reading. Today, according to values accepted by most authorities, a school-room should have from 20 to 35 f.c. from its electrical illumination system, and as far above that as is practical from natural sources. By that one standard alone, many of today's schools may be found faulty.

The second factor, by which a lighting system should be judged, concerns its distribution characteristics. High intensities of light are not enough; the useful illumination must be so spread out that even Joe Doakes at the rear inside corner desk gets his full share of foot-candles. If distribution of light energy is not reasonably uniform over the entire room area, these high intensity values can do more harm than good. Very few school-rooms are equipped to provide adequate light distribution. Stop in to visit a class some sunny day; count the pupils sitting in brilliant sunshine near the windows; count the others over in gloomy corners; note the contrast in illumination levels over various parts of the room and see for yourself! Ideally, light should enter a class-room from well above the level of the eyes, preferably from high on the walls or from the ceiling itself. Direct rays of sunlight must be eliminated; not blocked off by the typical window shade now in use, but diffused and spread softly into the room. There should be no sharp shadows, especially on the desks and working areas, yet there ought to be shadows enough so that third dimensional seeing is made easier.

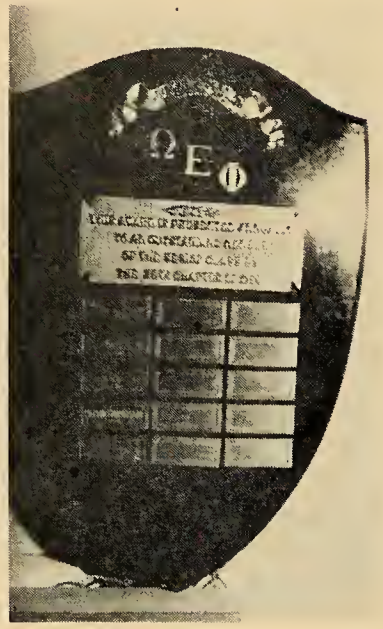
Does this sound like a big order? In achieving such conditions should we burn down the schoolhouse and build a new one with glass brick walls and self-illuminating fluorescent ceilings? That would be one way, but lighting requirements in most existing class-rooms can be met with relatively little expense.

For daylight control, inexpensive diffusing

(*Please turn to page twenty*)

JOSEPH J. SCANLON MEMORIAL AWARD — —

by George Milkie



As another semester is drawing to a close every one is wondering about the awards that are given to the most prominent students at M.C.O. Omega Epsilon Phi's notable contribution is the Joseph J. Scanlon Memorial Award to the outstanding senior in clinical proficiency and scientific aptitude.

This is not just another memorial, awarded in name sake only, but it stands for the struggle of the undergraduate to the rank of doctor. It symbolizes the strong desire in each and every student not only at Mass. College but also at all the Optometry Colleges of the world.

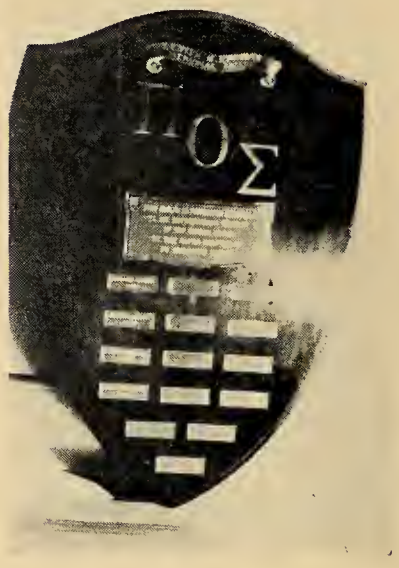
Joseph Scanlon had this desire and he struggled very hard as a student, knowing that soon he would die of a serious heart condition. Even though Dr. Scanlon had to drop out of school because of his illness he continued his struggle until he graduated.

In his honor, the Zeta chapter of O.E.P. is presenting this Memorial to serve as the basis for stimulating and developing in the optometric student clinical proficiency, scientific aptitude, and the initiative to serve. The award is open

(Please turn to page twenty)

Lester J. Epstein Memorial Award

by Joseph Ganz



In 1947, when Pi Omicron Sigma Fraternity was able to resume its normal functioning after the uncertain and hectic war years, the brothers decided to honor the memory of Lester J. Epstein, a member of the fraternity who lost his life in serving our country. Deciding that an appropriate remembrance would be in the form of an award to be made at commencement exercises to a member of the graduating class, the officers of the fraternity consulted administrative officers of the college who were pleased to accept the wishes of the fraternity and thus was created the "Lester J. Epstein Memorial Award".

In order to relate the award to the professional ambitions of Lester J. Epstein, it was decided that the award should be given to the senior who graduates with the highest academic achievement in theoretical and applied optometry attained during the three years of professional optometric education. The selection of the recipient is made by the faculty members of the committee on awards.

Lester J. Epstein, in whose honor and memoriam the award is made, started attending the then Mass. School of Optometry in 1941. He remained at his studies until he entered the service in 1943.

(Please turn to page fifteen)

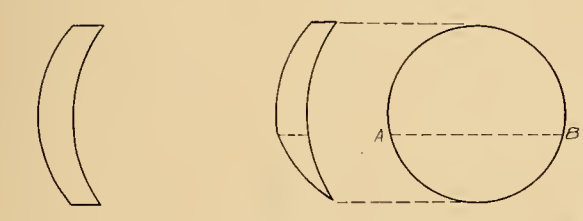
MEASUREMENT OF SLAB-OFF PRISM BY THE LENS MEASURE—

by Foster Namias, O.D.

The lens measure is essentially an instrument which measures the aproximate lens curvature power by utilizing the sagitta value of the curve. However, it will be shown that it may also be used in another novel manner.

Slab-off prism or bicentric grinding is a process that is used in single vision and bifocal prescriptions in order to compensate for undesirable prismatic imbalance at the near visual point. When there is a difference in Rx in the vertical meridians of two lenses, a certain amount of prismatic imbalance results, which may tend to produce asthenopia or even diplopia.

One way in which the imbalance at near may be reduced is by a special grinding process resulting in the lower portion of the front surface of the weaker plus or stronger minus lens being ground so as to produce prism *BASE UP* at the near visual point. The grinding is always done on the spherical surface which in most fused bifocals is the outside surface. Although the front surface has the same dioptral spherical curve in both the upper and lower portions, nevertheless, the centers of curvature are not in the same location due to the angled grinding of the prism. At the junction of the two spherical curves, there is formed a relatively invisible straight line. Because of this fact, flat-top bifocals are best adapted to the process. The diagrams below show the effect.



After the prescription is completed, it is customary to place the glasses in the lensometer with the instrument nozzle at the pre-determined near visual point and the amount of prismatic effect in one lens should be closely balanced by that of the other. It is not the intent of this article to completely discuss this method or process. The amount of slab-off prism on a given lens, however, may be checked by another novel method by means of the ordinary lens measure or clock.

The lens measure is placed with its three legs completely falling on the spherical upper curve of the lens and the reading taken. (See Fig. A). Next, the lens measure is moved so that the line formed by the legs is perpendicular to the straight line separating the upper and lower curves with the central movable leg directly on this line and each fixed leg falling on each side of the line. (See Fig. B). This reading will be higher in value. The dioptral difference between these two readings is the amount of slab-off prism that has been ground.

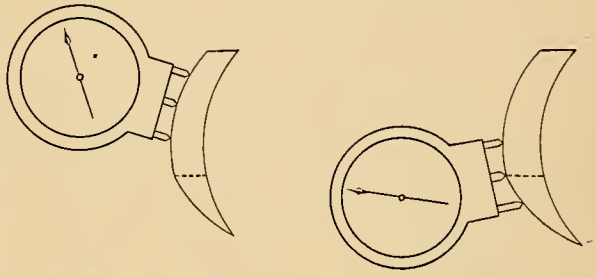


Fig. A Fig. B

For example:

In figure A—Reading may be + 6.00

In figure B—Reading may be + 8.00

Difference 2.00 D or 2 prism diopters.

This procedure for measuring the amount of slab-off prism works out approximately with most of the standard, present-day, lens measures and the reason is herewith explained.

For simplicity of explanation a plano flat lens will be used.

(Continued next page)

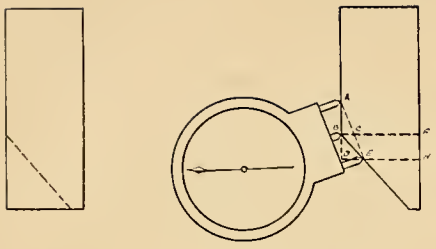


Fig. C Fig D

In Fig. C, the lens is ground slab-off along the dotted line. In diagram D, if the measure were held on the upper or lower area *alone* the readings would be zero. However, it can be seen that if the instrument is held as shown, it would now read a plus value dependent on the amount of prism produced. The portion of the lens below the central leg B is prismatic, and the difference in thickness between the base edge (BF) and the apex (EH) is the value DE (mm). BC (the movement of the central leg or sagitta) is ½ of DE. (In triangle ADE, BC bisects sides).

If "d" represents the total distance between the fixed legs of the lens measure, and using the approximate sag formula:

(1)

$$S = \frac{d^2 D}{8000\ (n-1)} \quad \text{or} \quad S = \frac{d^2 D}{4000} \quad \text{(When } n = 1.5\text{)}$$

S = sag in mm.
D = Dioptral power of curve (lens measure reading)
d = distance between fixed legs.

In grinding prisms (N = 1.5), the formula is:

$$(2)\ X = \frac{d \times P}{50}$$

X = difference in thickness between apex and base in mm.
d = calipering diameter
P = Prism value.

Using the above formula (2) the prism may be considered to extend from B to E or d/2

$$X \text{ or } (DE) = \frac{d/2 \times P}{50} = \frac{d \times P}{100}$$

$$BC\ (sag) = \tfrac{1}{2}\ D\ E = \frac{d \times P}{200}$$

RULE: WORK WITHIN ½ INCH WHEN DOING DIRECT OPHTHALMOSCOPY...

Substituting in formula (1)

$$\frac{d \times P}{200} = \frac{d^2 D}{4000}$$

$$D = \frac{20 \times P}{d}$$

As the distance between the outer fixed legs is about 20mm, this reduces to D = P.

This means that the dioptral difference as explained above is equal to the amount of slab-off prism ground. Although approximate formulae were used, the amount of slab-off grinding is seldom over 7 diopters and the above procedure is practically accurate in everyday practice.

Visual Progress

by Ira Schwartz

W. E. K. Middleton and E. Mayo of the National Research Council of Canada recently reported on "The Appearance of Colors in Twilight." This experiment deals with the observation of 64 colors of equal brightness, subtending 2°, surrounded by a neutral grey of the same brightness, and whose illumination was varied to simulate twilight and moonlight conditions. The result obtained, a temporary manifestation of tritanopia, are the same as the results reported from the above laboratory on viewing of colors at small subtense. The authors point out — "it seems to dispose of the idea that it is the central fovea that is tritanopic."

* * * *

About a year ago, Dr. W. H. Beierwaltes, of the University of Michigan, reported on some experimental results of X-raying the pituitary gland. Ten of his patients had a malignant exophthalmus and one a nonmalignant form. This work was done on the premise that a thyroid stimulating hormone produced by the pituitary gland was responsible for the tissue swelling in the orbit and consequent protrusion of the eyeball. A three year follow-up, of those patients who were benefitted by the treatment, showed an average recession of one-fifth of an inch, with a maximum recession of one-half an inch. The recession took place about three months after radiation, with maximum recession about one year after treatment. The only ill-effects noticed were mild headaches from three to seven days after treatment and a temporary loss of hair in the area of radiation.

The Better Vision Institute recently presented some interesting facts on the rate of involuntary blinking. They report that human beings blink more frequently under trying conditions than they do when their visual tasks are simplified. The average blink-rate increased at the end of an hour's reading. It was greater when the subjects wore glasses not suited to them than when they wore the proper correction. When the size of type was reduced the blink-rate increased and when a glaring light source was placed in the visual field the rate also rose.

Want to Practice Optometry?

by Bernard Berstein

NEW YORK. The following is a statement of policy of the Board of Regents adopted Nov. 16-17, 1950 and amended on May 24-25, 1951, with regard to taking State Board Examinations in New York.

"*Voted,* That applicants from unregistered schools who have been graduated therefrom prior to July 1953 and who were residents of New York State when they commenced their study at such school be admitted to the licensing examination in optometry upon presenting evidence of completion of the final year of study in a registered school or of completion of a post-graduate course of study of at least one year in such an institution."

Schools of optometry registered by the Department:

Univ. of Calif., School of Optometry
Professional Courses in Optometry, Columbia Univ.
Ohio State Univ., School of Optometry

NORTH CAROLINA. Applications for license must be filed 30 days prior to date of examination. The secretary shall notify each applicant as to the acceptance or refusal of such application one week prior to the examination. The educational requirements of an applicant state that he must hold a certificate of graduation from a school of optometry approved by the board of examiners. (M.C.O. is approved by this state). A passing grade of 70 in all subjects before a license may be issued. Failing in 2 or more subjects requires a complete re-examination with an additional fee of $5.

An optometrist may act as a consultant to industrial plants where an industrial vision program is being or has been installed for the purpose increasing production.

BOARD EXAMINATIONS

(*Listed in consecutive calendar order*)

May (first week) — Wisconsin, Madison, Lorainc Hotel.
June 9-11 — Vermont, Montpelier, State House.
June 16-19 — Pennsylvania, Philadelphia. Penna. State College of Optometry.

(*Please turn to page nineteen*)

NEWS OF THE M.C.O. ALUMNI ASSOCIATION

In this day and age of rush and tumult, there is a great competition for the spare-time hours of everyone. Fraternal, community, professional and other organizations want one's interest and time, TIME, TIME. Family demands, as well as the interest in television, sports, and hobbies, leave the average man with only a small allotment of hours for any special interests, and certainly this is true of most practicing optometrists, many of whom work long hours and evening hours in an honorably, needed profession.

Hence, it is with a small amount of pride that the Mass. College of Optometry Alumni Association has passed through a period of growth and accomplishment. An efficient executive board has guided the Alumni Association through its past year, and the members of this board merit recognition:

President ..... Dr. Hyman Rossen
1st Vice Pres. ..... Dr. Warren Robinson
2nd Vice Pres. ..... Dr. Frank Kozol
Treasurer ..... Dr. Harold Goren
Secretary ..... Dr. Eleanor Fuschetti

Executive Board

Dr. Foster Namias
Dr. Harold Cline
Dr. Paul Cline
Dr. Samuel Goodfader
Dr. Lynwood Storer

Elected to serve on the Executive Board of the Alumni Association during the next fiscal year (till March '53) are the following new members:

Dr. Robert Bianchi
Dr. Raymond Ross
Dr. Louis Anapolle
Dr. Malcolm Kates

In a successful bid for the time and interest of the graduates of the college, the Alumni Association presented four excellent educational meetings, one each in May, September, and November 1951, and one in February, 1952. Dr. Howard Blazar, an opthalmologist, presented one program. Dr. David Landau, a psychiatrist, was speaker at another program. Dr. Ann Sutton Nichols, an optometrist who is teaching a new method of visual training, was featured at one meeting. An excellent panel, consisting of four optometrists, Drs. Arthur March, Warren Robinson, Foster Namias, and John Bonney, and one ophthalmologist, Dr. D. Robert Alpert, presented the educational program at one meeting.

An Alumni Award has been established, to go to an outstanding member of each graduating class, and with the first Award to be made to a member of the Class of 1952 at the graduating exercises this year. The Alumni Association will also present the College with a handsome placque for display in the lobby of the College, and all winners of the Alumni Award will be listed on this placque.

A student guidance program, which attempts to supplement the program of the College, has been put into effect, and members of the Alumni Association's executive board are coming to the College on various announced dates to give whatever advice they can to senior students.

An outstanding Alumni Luncheon was held at the Hotel Statler on March 9th, the opening day of the Congress of the New England Council of Optometrists. Dr. Joseph Montminy, Sr., President of the College, gave an inspiring talk to the large group of alumni present.

Rather than continue this list of Alumni activities, let us stop and reflect that the Alumni Association has been successful, to some extent, in the competition for the graduates interest and time. But more important in this: the Alumni Association can do tremendous good for our Alma Mater and for our profession if you, the undergraduate of today and the graduate of tomorrow, determine that you will not forget your college, will not graduate from your college and away from your college, but instead will graduate from your college into the Alumni Association. Your membership for the first year following graduation is free, but more than mere membership is wanted. It is interest, it is willingness to take the wheel of leadership, that is needed.

HYMAN ROSSEN '43

THE SCOPE

Official undergraduate publication of the
MASS. COLLEGE OF OPTOMETRY
178 Newbury Street
Boston, Mass.

Editor-in-Chief ..... ABRAHAM SHAPIRO
Associate Editor ..... LEWIS RABINOWITZ
Art Editor ..... EMANUEL GLASSER
Photography ..... GEORGE MILKIE
Business Staff ..... THEODORE GOOLST, Mgr.
HARVEY TUCKMAN
Advertising Staff ..... JERRY WASSERMAN, Mgr.
ARTHUR GIROUX
ROBERT PACKER
Circulation Staff ..... DAVE SPRECHER, Mgr.
VITO GESUALDI
PAUL SUSSMAN

Staff Writers:

STANLEY LEVINE
IRA SCHWARTZ
BERNARD BERSTEIN
JOSEPH GANZ
THOMAS COUCH
SIDNEY GREEN
JOE SICA
MARTIN FRIEDMAN
HENRY LEVIN
ELVIRO MASTROBUONO

Contributing Editors
ARTHUR O. BRUCE, M.D.
SAMUEL J. WASSERMAN, O.D.
LESLIE G. WRIGHT, JR., O.D.

Faculty Advisor ..... DEAN RALPH H. GREEN

FROM THE ASSOCIATE EDITOR — — — —

Two months ago, the subject of my editorial was the Nedo-Brady Bill, which would have removed the restriction on the sale of ready-made eyeglasses in New York State.

We are glad to inform you that this vicious bill died in committee in the closing days of the Legislature.

This of course, gives us another opportunity to thank the A.O.A. and in this instance, the New York State Association for their splendid efforts in defeating legislation which was not only detrimental to Optometry, but to the public health in general.

We, as individuals, appreciate such actions by these organizations when they affect us personally. But I'm sorry to say that many of us do not realize that it is only through the organized effort of such groups, that Optometry can move ever forward.

These organizations are, of course, constantly enabling the public to realize that their vision is being safeguarded, at all times, by the Optometrist.

Since most of our readers are students, I would like you to remember that the students of today will be the Doctors of tomorrow, whose duty it will be to maintain and protect the vision of our nation.

If we all realize this, we truly will be men of vision.

OPTOMETRIC EVENTS — —

by Thomas A. Couch

BOUQUET FOR MAC CRACKEN

The recent victory for Optometry in the controversy between the Office of Price Stabilization and the profession is already known. What hasn't been told is the fine job done in our behalf by Mr. Wm. P. MacCracken, A.O.A.'s Washington attorney, who laid the groundwork for the ultimate disposition of the matter through a long series of conferences with O.P.S. officials. Again Optometry congratulates Mr. MacCracken for the fine work he has done.

STUDENT LOANS

Representative Furcolo has introduced a bill (H.R. 6161) which would provide loans to "needy and scholastically qualified students" in maximum amounts of $1,000 a year for college students and $1,500 a year for graduate students.

AMERICAN OPTOMETRIC ASSOCIATION

American Optometric Association's 1952 Congress at Miami Beach is approaching near. The Congress has been geared to include an unusual agenda of educational events as well as a full program of entertainment.

The members will be housed on famed Collins Ave. which now claims a concentration of glamorous hotels equal to none in the world.

The very blue sky, the bright sun, and cool ocean breezes create a background for which business and relaxation can be integrated pleasantly.

Several nationally known speakers have been invited to attend the event. The educational theme of the Congress will be "Prevention and Correction of Visual Problems of School Children."

SENIOR SLANTS

by Apartment 29

As surely as textbooks will be bought and remain untouched; laboratory reports will be filled before attempting the experiment; examinations will be faithfully crammed for on the night before; students will laugh in self-defense at instructors' puns; so must we face the realization that we have reached another level in our advent towards manhood. Soon we are to proudly accept the diploma which will enable us to undertake our chosen profession — the practice of Optometry.

Looking back over the past four years spent in school, many memories are recalled:

—Our first few days in the school when sophomores were addressed as "Sir", and seniors were gazed upon in awe.

—The fiendish experiments performed on the fourth floor of a mysterious building known as the clinic.

—The construction of the First National Store especially during our trimester exams.

—The sweet secretary who was willing to do almost anything for the students.

—The "rat races" conducted by some students in the Zoology lab Saturday afternoons and Sunday mornings.

—Our Saturday mornings with the Greeks and Latins.

—Our softball games against the Seniors and Dr. Kuhn.

—The formal introduction into our profession by the famous words "All right, men, this is what you've been waiting for, This Is OPTOMETRY!"

—Our utter confusion due to P. P., P. R., Amp., Range, etc.

—Our surprise in learning that the clinic has a front entrance.

—The infinite number of crutches used to remember the bones of the human body.

—The first practical demonstration of the use of the Ophthalmoscope which resulted in three scarred corneas.

—The all-important feeling of being the top class in the school although only a Junior.

—The moving from our old location to our present building and the heartfelt loss of a pinball machine.

—Our discovery of the "weeping wall" in the basement.

—The "untouchable" front stairway.

—The spacious Senior Bulletin Board where assignments were hidden by newspaper cartoons, classroom drawings, pictures of beautiful models, and selling propaganda.

—The unforgetable "matinee performances" when Hyperopes exercised their full accommodative powers, and Myopes became Emmetropic or were found hanging out the window.

—And many, many other fond memories.

In the final analysis, we would like to take stock of what we have given and what we have yet to give. In these past years we have given our sweat, our tears, our money, our hair, our blood-shot eyes, and, lately, even our blood. In the future we must be prepared to give our utmost in every conceivable way to raise the standing and prestige of the Optometric profession. In this task, we feel certain that noboby in our class will falter. A major step in the proper direction was the donation of the class treasury to the "Perkin's Institute for the Blind".

And so, in our final words, we say, "Thanks for the pleasant years spent together; for the lasting, understanding friendships we have made; and best wishes for success and happiness in the future. If we have, in our few articles, expressed your feelings, or made you smile now and then, we feel the effort was worth while."

Congratulations from the class are extended to Tom Cochary on the birth of his daughter, Laura Jean . . . to A. Abrams on his marriage to Cynthia Scott . . . and to all those planning to enter wedded bliss upon graduation: Buddy Chernoff . . . Teddy Goolst . . . Irv. Kaplan Lew Rabinowitz . . . and the writers of this column.

JUNIOR JIBLETS

by Y. B. Anonymous

To anyone who may feel, as a result of the last article, that Juniors are the least bit afraid of anybody or anything, I now present further proof.

The scene is a thoughtfully loaned Senior room; the air *ubiquitous* with tension. (This word is intended to make the entire article professional.) Examination papers have been passed out, and so has Kurlan.

In a corner, Bagdigian yawns placidly — "only 13 questions." Ganz yawns placidly — "Yeh!" Deckelbaum yawns placidly and keels over.

The instructor attempts to comfort him with a fatherly smash to the groin — "Remember, Deckelbaum, marks ain't no indication of your intelligence, nohow." With further assurance that neither are I.Q. tests, Jack scrambles down from the light fixture and begins to write. Aaron, meanwhile, is also writing, with a pencil in either hand, and a "spare" clutched in his teeth. He completely ignores Pauley, who after a moment of ecstatic panic is gathering his desk top into small piles. Things are now running smoothly.

Claughsey ponders the first question for a few minutes, and then considers suicide. Anderson helps him consider by drawing coffin-shaped triangles. Glasser has stopped looking confused, and waits patiently, refusing to do anything until he has officially started the attendance sheet moving.

Schwartz alone remains tranquil and oblivious to all. He sits in his little corner happily swishing a slide rule back and forth, his face aglow with innocent rapture. Shuldiner watches a while, and sadly considers the prognosis. No child of his will grow up with an erector set.

The silence is deafening, except for an occasional moan, or the sound of hair being torn from its roots. Suddenly, O'Neill shatters the stillness with a scream about gambling and losing — leaps out the window, and flies away in search of the Senior Space Cadets. Hollander, knowing it is impossible for people to fly, paces the ceiling, nervously. The instructor, being quite conservative, jumps up and down — pleading with Hollander to cease this mockery of science. Jorczyk looks up accidently at this time, and seeing Hollander, tears off his old Rx, and is last seen galloping down Commonwealth Avenue towards the Clinic, with his briefcase clutched tightly to his bosom.

Meanwhile, clothing derranged and hair mussed up, Sinclair has been writing furiously. Sprecher tiptoes to him daintily, as any Mastadon might, and whispers anxiously in his ear. Sinclair whirls around glaring, and points to the door — "Who the hell cares what's on the meter — go! !"

Soft tears appear in Sprecher's eyes as he lumbers pitifully to a corner where he sits quietly, munching on a radiator. Siegel, remindful of music's charm, hums softly to him. Unappreciatively, Sprecher swings — sending Siegel through the front wall. As he leaves, vague murmurs return — "XYTZ LBAR DYNF" (Meaning — "How angry this young man is!").

Duclose and Kmiec are standing side by side, at this time, banging a tango rhythm on the wall with their heads, as Hebert waits patiently, with head cocked, for the off-beat. Federici briefly condones such behavior, and continues to fashion a noose out of 3 neckties borrowed from Sinclair's trial case.

Finger is the first to finish the exam. As he departs with a shoehorn held lovingly to his cheek, he sighs — "Come, little one, you and I shall make our way together." A tiny voice is then heard to rebel — "You need a shave worse than Winard, Buster."

A circle of dazed students has gathered outside the examination room by now, and Daigle hastens to ask if he had the right case — the one about the Mongolian idiot who became exotropic upon looking at a full lunar eclipse in Nome, Alaska, while standing on an ant hill, on Thursdays. A voice inquires — "Was he looking up?" Daigle replies that he didn't specify. The voice answers — "Wrong! No evidence of having read the desired paragraph."

Daigle rushes down to Back Bay Station where he grinds himself into 80 pounds of hamburg with the aid of a fast express. Four other students, led by Major Crowley, with drawn m.m. rule, rush in phalanx formation to the nearest policeman, and ask to be locked up in the better interests of society.

(*Please turn to page twenty*)

SOPH SOBBINGS

by Sidney Green and Joe Sica

Disa, data, or shootin' the chata.

Well, spring has sprung, and in spring a young student's fancy turns to vacation and softball.

The Soph nine, undisputed M. C. O. champs last year, again loom as a heavy favorite. That is if Sid "Gordon" Green fails his Marine physical.

We understand that there are a few malcontents in the class led by such notables ? ? ? as "Bowling" Allie and "Eight Ball" Brault. This group, aided and abetted by a few aliens (freshmen), plan to overthrow the reigning champs. If this foolishness continues, these "Outcasts" will be known as "In-casts". Ask the senior who slid home.

Congratulations to Mac for being elected prexy of the O. E. P. frat. I understand that he's going to live in "Danny's Dormitories", next year. He plans to move the frat room there, also.

Speaking of spring, it seems that a certain "early worm" has turned on the "Bird".

Number one on Guida's Hit Parade is "Pop Goes the Measles".

If Joe Sick-a gets to school any earlier in the morning, he'll be collecting a night watchman's pay.

Latest rumors have it, that a certain Anatomy teacher came over to this country in a "blood vessel" via *the* Isles of Langerhan.

Hollywood has approached Markowitz and the Marcuses to star in a new film depicting the life story of the Andrews Sisters.

For those who are contemplating the John Hancock way out, my advice to you is — "study before you leap."

The straw that broke the classes' back: "What is the length of Tonsil's eyeball?"

Since we're all tired out from our vacation, most of us are glad to get back to school for a rest.

Many sophomores are wondering if Vito and Dr. Cline are related to each other. After all, that blue suit . . .

(*Please turn to page seventeen*)

Happy the Patient

. . . whose eye care has included careful regard to style as well as Visual Correction. This lady is able to change her glasses as she changes her clothes to match the occasion because of her Optical Wardrobe.

SHURON OPTICAL COMPANY, INC.

Established in 1864

FRESHMAN REVIEW

by Henry Levin and Al Mastrobuono

Well, now that the semester is drawing to a close and there aren't too many issues of the *"Scope"* remaining, our brief careers as collaborating writers are rapidly ending. Not that we're sorry, you understand. It has been difficult, at times, trying to get information from thirty-six individuals and to present the material as interestingly as possible. We haven't always succeeded; yet we haven't always failed. Yes, we've had our share of good articles and bad ones (probably more of the latter), but looking back now, it was worth while. In the years to come, we'll get a bigger charge from reading what happened to the class of '55 during their first year at M.C.O.

Getting down to business, let's see what has happened in the social world, (this isn't too hokey, is it?). During the past month, both fraternities held their annual banquets. New officers were installed and pledges were initiated. The report was that a good time was had by all. and both affairs were a success.

The baseball season is here, both on the national scene and here at M.C.O. From now to the end of the semester, the various classes will play one another in the intramural softball league. The Freshman array shapes up as a strong club, with the following members fighting for first-string positions: Bob Graham, Hank Levin, Al Greaves, Ralph Hebert, Bill Ryan, Wally Flynn, Larry Dunn, Paul Taylor, Lee Eastman, Pete Eudenbach, Art Giroux, Lee Gellerman, and Bill Fehrnstrom. All we'll say now, regarding the softball season is that may the best class win — and it had better be the Freshmen!

That's all for this month, so we'll sign off here. Good luck — studying for the finals, and don't forget to watch those "quickies."

O. E. P.

by George Milkie

The results of the annual elections was quite the upset with the future Junior class taking over the ruling hand. Before we give the results of the elections we would like to take this opportunity to commend; Gene Bogage, Bob Saul, John Rutkowski, Gordon McMurdo, Norman Becker, Charles Crowley, and John Eleftherio as the retiring officers for the swell job that has been done for the fraternity this past year. Thanks a million brothers — may all your future indulgence be with the greatest luck.

We would also like to congratulate the future officers: Gordon McMurdo, president; Joe Eiduks, vice president; Leo James, recording secretary; John Gould, corresponding secretary; Sid Green, treasurer; Carman Guida, librarian; and Joe Sica and Paul Taylor sargeants-at-arms. Congratulations to all of you and may your reign be a very successful one.

* * * *

Well, the Big Night has finally come!

April twenty second arrived as did the brothers with their wives and dates, en masse, at the Hotel Lenox — to dine, wine, and dance O. E. P.'s Annual Banquet. I'm sure everyone was "busting at the seams" after the delicious steak or roast beef dinner.

Brother Gene Bogage initiated the new officers and welcomed all the guests. The guest speakers were Dr. Green — "I Can Remember When" after which Dr. Namias told "His Little Story". Then, our faculty advisor, Dr. Hochstadt, said a few words to congratulate both old and new officers.

We deeply regret that our other honored guest, Dr. Cabitt, was unable to attend due to his illness.

Dancing followed with music furnished by Mary Ann's Combo.

KNIFE EDGE THICKNESSES OF LENSES—

Ira Schwartz '53

From time to time the problem arises of determining the exact diameter of a convex lens when the lens is knife edge (zero thickness) and only the powers of the curves and the center thickness (c.t.) are known. If the lens is of the double convex or plano convex forms the treatment by sag formula is quite appropriate. However when the lens is either meniscus, periscopic, or biconvex the mathematics involved in computing the knife edge diameter can be quite cumbersome as indicated in equation (1)

$$c.t. = S_1 + S_2 = r_1 - (r^2_1 - d^2/4)^{1/2} + r_2 - (r^2_1 - d^2/4)^{1/2} \qquad (1)$$

where $S = r - (r^2 - d^2/4)^{1/2}$ from the conventional exact sag derivation. The entailed mathematical solution can be eliminated by the treatment herein proposed.

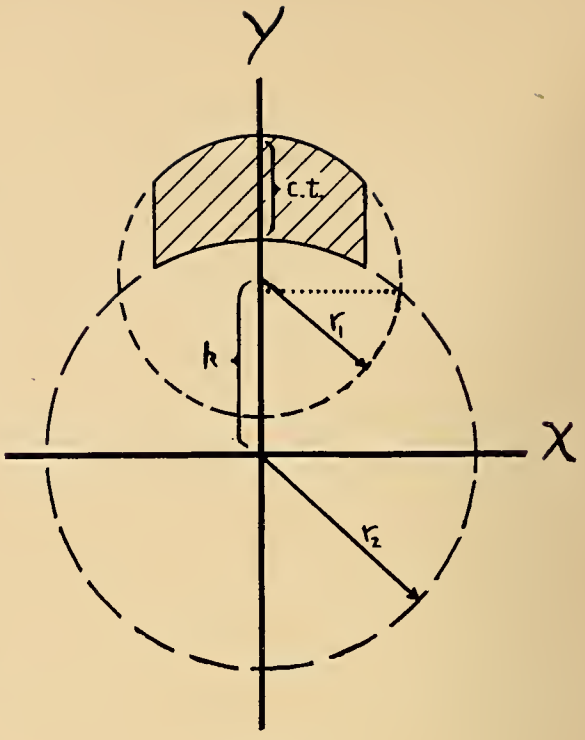


FIGURE 1

In Figure 1, each surface of the lens is shown as a portion of the circumference of a circle, the radius of which is determined by the power of the curve [$r = K\ (n_2 - n_1)/D$]. When the center of one of the circles is considered to be the origin of an abscissa ordinate arrangement, the generalized circle formula for that circle is reduced to

$$x^2 + y^2 = r^2_2 \qquad (2)$$

The generalized formula is retained for the other circle

$$(x - h)^2 + (y - k)^2 = r^2_1 \qquad (3)$$

In this case h equals zero. The distance between centers of the circles, k, is readily determined since the radii and center thickness of the lens are known.

Solving equations (2) and (3) simultaneously gives the x, y coordinates of the points of intersection of the circles. By observation therefore, the x value obtained is equal to the radius of the knife edge lens.

For example:
Given a lens of +12 power ($n = 1.53$) having

(*Continued next page*)

CONTINUOUS VISION

. . . he's got it

your patients want it too

RX UNIVIS CONTINUOUS VISION LENSES

Help give your presbyopic patients back the vision they have lost — the effortless, unbroken vision of youth. You may do this by prescribing "Satisfaction Insured" Continuous Vision Lenses for patients requiring reading adds of 1.25 and over. Prescriptions for Univis Continuous Vision Lenses are carefully filled in our precision laboratory.

WILSON & HALFORD OPTICAL CO.
387 Washington Street
Boston, Mass.

curves of +18 and −6 diopters and a center thickness of 9.16 mm. Determine the knife edge diameter.

$$r_1 = K\,(n_2 - n_1)/D = 1000\,(1.53 - 1)/18 = 29.44\ mm$$

$$r_2 = K\,(n_2 - n_1)/D = 1000\,(1.53 - 1)/6 = 88.33\ mm$$

$$k = 88.33 + 9.16 - 29.44 = 68.05\ mm$$

$$x^2 + y^2 = r_2{}^2 = 88.33^2 \qquad (2ex)$$

$$x^2 + (y - 68.05)^2 = r_1{}^2 = 29.44^2 \qquad (3ex)$$

Subtracting $(3ex)$ from $(2ex)$

$$+ 136.1y - 68.05^2 = 88.33^2 - 39.44^2$$

$$y = 85.0$$

Substituting in $(2ex)$

$$x^2 + 85^2 = 88.33^2$$

$$x^2 = 24.04$$

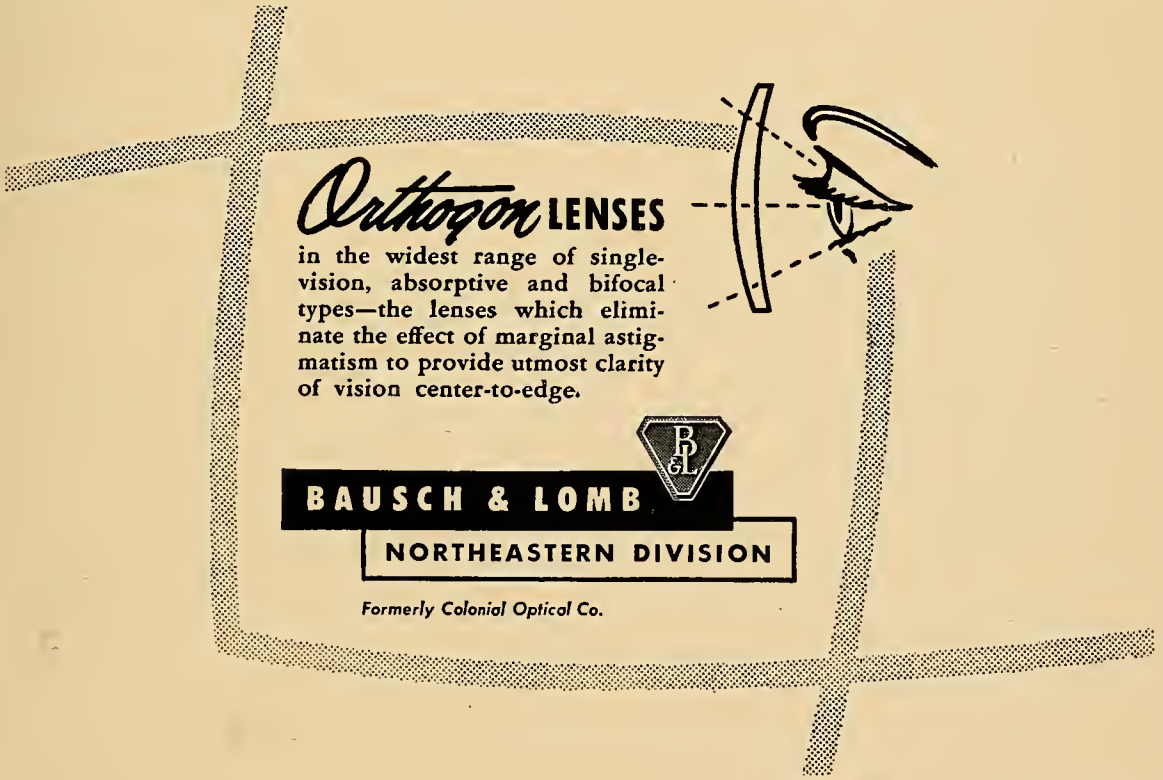
and the diameter equals $2x$ or 48.08 *mm*.

Before coming to college here, he graduated from Fort Lauderdale High School and attended the University of Florida.

Previous winners of the award, as chosen by the faculty committee on awards, have been:

in 1947 ..... Arthur Cowan
in 1948 ..... John Flaherty
in 1949 ..... Leon Ginsberg
in 1950 ..... Alfred Rappaport

In addition to the personal gift given to each recipient, the fraternity has hung a plaque, commemorating each award winner, on the wall of the main floor of the college building.



PI OMICRON SIGMA

by Joe Ganz

Almost sixty brothers, to be, faculty, alumni and guests attended the fortieth annual banquet of P.O.S., which featured the installation of officers and initiation of pledges. The affair was held April 1, at the Hotel Brunswick in Boston, with Dr. Abe Gottesmann, alumnus, serving as toastmaster.

Guest speaker was Dr. D. K. Provencher, national director of ethics and economics for the A.O.A., who disucssed the dynamics of the professional personality and practice management.

Dean Ralph H. Green was presented with a silver cup to honor his twenty five years of service to the fraternity as Grand Chancellor. He was then installed as Exalted Grand Chancellor.

Dr. Henry Cabitt, newly chosen faculty advisor for the fraternity, was presented with honorary membership in the fraternity. Well known by the seniors, Dr. Cabitt will now be in a better position to get acquainted with the underclassman. Dr. T. Reynolds was also presented with honorary membership in thanks for the gratifying support he has given to the fraternity and the friendly manner in which he has enriched the students' biology education.

The brothers were very sorry that Dr. A. March, due to illness, was unable to attend the banquet where he was to be installed as Grand Chancellor. Despite the lack of formal installation, the fraternity, is proud to have Dr. March aiding it in his new capacity.

Officers installed for the coming year are:

Chancellor ..... Simon Bagdigian
Vice-Chancellor ..... George Nissensohn
Scribe ..... Alan Kurlan
Guardian of the Exchequer ..... Paul Sussman
Social Chairman ..... Mel Slotnick
Sergeant at Arms ..... Mark Peloquin
Corresponding Secretary ..... Joe Ganz

The fraternity is proud to welcome as brothers:

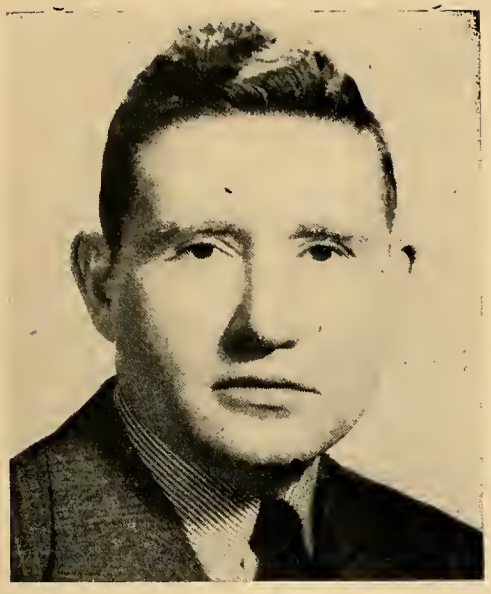
Elviro Mastrobuono
Jules Shuldiner
Bernie Berstein
Leon Litman
Harvey Tuckman
Saul Purcell
Vito Gesualdi
Jerry Wasserman
Henry Levin
Robert Packer
Bill Fehrnstrom
Leon Gellerman
Ted Fuschetti
Mike Bolvin

Mel Zolot and Dr. Gerry Davis are sure to be contacted next year to help stage another alumni-fraternity basketball game. The discussion afterwards centered more about whose ache had what kind of pain rather than the score of the game itself. The alumni, incidentally, won by a small margin.

(*Please turn to page twenty*)

SILHOUETTES

by Stanley J. Levine



DR. SAMUEL WASSERMAN

Dr. Samuel Wasserman received his B.S. degree from New York University in 1938, and then decided to study Optometry. He was an honor student at the Massachusetts College of Optometry, and four years later he graduated cum laude. He is not a new addition to the faculty, but one who has long been associated with the college, both as a student and professor. Dr. Wasserman began his teaching career as a laboratory instructor, and now, about ten years later, holds the title of Assistant Professor of Geometric Optics.

After graduating in 1942 Dr. Wasserman entered the United States Army where he served as an Optometrist in the Medical Corps for three and one half years. He was stationed mostly in Miami, Florida, but traveled about a good deal with an Army traveling unit of Ophthalmlogists and has done much to organize and establish modern eye clinics at the various hospitals. He was also associated with the Veterans Administration for a period of time in Boston.

Dr. Wasserman, desiring to round-out his optometric training has taken graduate work in Geometric Optics and Physiological Optics and has taken Dr. Feinbloom's Contact Lens course. Not wanting to be one-sided, he has also taken other academic courses, the latest of which is his pending Master's Degree in Education from Boston University, which should be awarded some time in June. His thesis concerned a laboratory manual for Geometric Optics — something new and something which should be useful to every student.

Dr. Wasserman is very active in academic affairs, being on the board of admissions and promotions. He also supervises and correlates all the data of the mandatory I.Q. tests taken by all new students. This is a pet project of his, for intelligence in a field or realm which he is now delving into. He is studying such philosophical questions as "What is Intelligence?, How can it be measured?", etc. A very fascinating venture, I am sure. Another of his primary interests is in the field of remedial reading.

His practice in Randolph speaks for itself in the satisfaction that his patients leave with. He is a family man, with a lovely daughter whom he raves about, and with another child on the way. Dr. Wasserman is a firm supporter of "professional" optometry and is convinced that optometry as a whole will mature very rapidly, and will soon be accepted by ALL the professions.

His love of teaching and his keen sense of judgment not only in other fields as well, has won for him the respect of all his students. Dr. Wasserman is proud, and for good reason too, for his courses are arranged so that any student keeping with him should satisfactorily pass any Geometric Optics State board examination in the nation.

SOPH SOBBINGS—*continued*

A final word about the finals. As my father used to say when he played football for old Jacksonville "hit 'em hard, hit 'em fast, and hit 'em low."

To the many readers of this column, your faithful reporters want to take this opportunity to express our thanks to Colonel Dave LaChance and Curt LaPlante for having given us valuable assistance in the writing of this column. We understand that this is the type of column you want and that is what we will give you. If in the course of our article, we have slandered or hurt anyone, believe us, it was purely *intentional.*

age, and from that point on intellectual development is dependent on *education* and the application of mental powers.

Emotional maturity presents a somewhat more interesting, and very probably a more important, aspect in that it is of prime importance to our everyday life as social beings. Probably, too, the attainment of emotional maturity would bring more actual benefit to the average person in our present-day mode of life because the acme of development for social animals lies not in originality of thought so much as it does in *co-operation*, and the prerequisite for this is certainly good emotional adjustment.

There are several features about emotional development that should be noted in any attempt to define the term as a whole.

The first of these is the fact that the emotionally mature person is capable of gradations or degrees of response. His reaction is not of the all-or-none type. If he is balked in a desire he does not lie on the floor and scream, to carry the example to a ridiculous extreme. Also his response is capable of being delayed; if he is frightened he does not necessarily run, if he is angered he does not strike. In the words of the scientist, he can check the "motorphase" of emotion. Children, on the other hand, are impulsive and typically "cannot wait" to satisfy their desires.

Another indication of emotional maturity lies in the handling of self-pity. The "poor-me" attitude must be held in abeyance as much as possible; a good rule to follow is *not to pity yourself in an unfortunate situation any more than does your neighbor.*

One more important phase is *independence* of thought and action. The emotionally mature person must be able to arrive at his own opinions and reach his own conclusions. Witness the ordeal in the primitive "coming-of-age" ceremonies in which the solitary journey was so frequently practiced; also the all-night vigil imposed on the seekers-after-knighthood in the Middle Ages.

It will be seen in glancing over the ideas so far expressed that to achieve emotional maturity one must refrain from acting in a way which is commonly called "childish." The ideas are, of course, as old as man. They are expressed in countless fables and adages, as: "Look before you leap," "Marry in haste, repent at leisure," "Count ten," etc.

If for no other reason the value of carefully graded and delayed emotional reaction is well seen in the inefficiency of the sudden spasmodic response of the emotionally immature. It is a proven and undisputed fact that one cannot think, run, strike, steer or dodge efficiently if he is in the habit of allowing a rush of nervous energy to take complete control of him. And for the professional man, the very essence of whose life is independence of thought and action, the ability to think clearly and to act deliberately, even under stress, is a *sine qua non.* People renowned for their "temperament" (emotional immaturity) are likewise well-known as having to have managers to guide their lives for them, and while such a scheme may work for the prima donna, it will not for the average optometrist. So take stock now of your holdings in this highly essential professional commodity and decide what you can do to add to them.

** Editor of "The New England Journal of Optometrists" and instructor in ethics at the Massachusetts College of Optometry.*

"With the shape the world is in today, who is going to notice you?"

OPTOMETRY—*continued*

June 16-27 — New York State (*practical exams,* June 16-20, 132 W. 60th St., New York City; *written exams,* June 24-27, Albany, Buffalo, Syracuse and New York City).

June 18-19 — New Hampshire, Concord, State House.

June 22-24 — Ohio, Columbus, Ohio State Univ., College of Optometry.

June 23-25 — New Jersey, Trenton, Hotel Stacy Trent.

June 24-26 — Connecticut, Hartford, State Capitol.

June 30 - July 2 — Maine, Augusta, State House, Senate Chamber.

July 13-15 — W. Virginia, Charleston, Daniel Boone Hotel.

July 13-17 — Kansas, Topeka, Jayhawk Hotel.

July 14 — California, Los Angeles, Los Angeles College of Optometry.

July 27-31 — Texas, Dallas, Baker Hotel.

July 31 - Aug. 3 — Utah, Salt Lake City.

* * *

N.B. — As reviewed earlier, the California Optometry Act provides that applications to take State Board Examinations in this state must be filed at least 30 days prior to any examination held by the board. Thus, the deadline date for filing application is June 14, 1952.

the why behind Insured Satisfaction

on Univis Continuous Vision Lenses

It's one thing to read "CVs will help you provide better vision for your presbyopic patients, and will aid in building better patient satisfaction." It's far more interesting for you to see it happen in your practice. You can.

Under the Univis program of Insured Satisfaction you may fit your presbyopic patients with CVs—there's absolutely no risk of financial loss due to patient dissatisfaction.

YOU can see what CVs mean to your presbyopes and to you with this assurance: *Should any CVs be returned to you for any reason, your laboratory is authorized to replace them with Univis D bifocals, ground to prescription, at no charge.*

• • •

THE UNIVIS LENS COMPANY
DAYTON, OHIO

univis

screens can be installed so that maximum benefit be extracted from the sunlight. One single coat of proper paint on a room's interior walls and furnishings can do wonders towards improving light distribution and reducing bothersome contrasts between the too bright and too dark areas. Modern pastel colors may reflect up to six times as much useful light as do the dingy wall finishes so commonly used today. Black slate blackboards can be replaced by lighter chalkboards.

Almost any system of artificial lighting can be improved by comparatively minor changes. Old fashioned lamps should be replaced by modern, more powerful units to provide the proper values of light intensity. It is obvious, of course, that precautions must be taken to avoid excessive glare, by shielding such lamps within the field of view, and, whenever possible, placing them high above the normal line of vision. Simple individual switches on each lamp will provide sufficient flexibility to supplement changing daylight conditions.

Such is a very brief outline of the problem of school lighting. It might well be a matter in which the properly informed Optometrist could give valuable advice. For anyone who might be interested, a list of source material books follows.

Good reading, and a bright future!

SOURCE MATERIAL:

"Electrical Illumination" —
John O. Krackenbuhl

"The Scientific Basis of Illuminating Engineering" — Parry Moon

"I. E. S. Lighting Handbook"

"Standard Lighting Guide" —
Illuminating Engineer's Society
1860 Broadway, New York

"Lighting Design" — Moon and Spencer

"Light, Photometry and Illuminating Engineering" — Barrows

"The Coordinated Class-room" —
Harmon and Wakefield

Plans are now being made for what will probably be the final big social event of P.O.S. before examination time; this big "blow off" being the annual Senior Farewell Dance, open only to members of P.O.S. Social chairman, Mel Slotnick, and his committee are making extra special plans to give the seniors the fond farewell they deserve.

Casey walks out somberly, and removes his right shoe and sock. He then withdraws a cleverly hidden razor blade from between 2 toes. Before he can mess up the hallway, however, "Wild Bill" Coniaris pins him to the wall with one arm, and confiscates the razor blade with the other.

Casey, perfectly recovered, now, begins dropping chairs on pedestrians without Rxs.. Only when his chair splatters around him does Purcel realize that he has left the exam room early.

The final coup de grace, as a result of all this hysteria, is that examinations will now be limited to 5 minutes with a two-minute break for breakfast.

---

to all men and women in the upper twenty percent of the graduating class, who have completed the last three years of the curriculum at this institution.

The selection of the recipient is made upon his or her character, appearance, clinical proficiency, attitude toward the profession, the school, the faculty, and fellow student. It is also based on the interest, participation in, and support of, the extra-curricular program of the school.

The most deserving male or female student shall be selected by an award committee composed of: Dr. Green, Dean; Dr. Hochstadt, advisor of the Zeta Chapter; Dr. Antanellis, Director of the Clinic; and one or more members of the faculty.

In the past, Doctors Bernard Potuin 1947, Jack Goldstein 1948, Donald Nahigyan 1949, and Melvin Grossman, 1950, have been privileged to receive this award. Will you be one of the privileged ones also?